Application No. 10/663,316
Amendment dated December 18, 2006
Response to Office Action of October 17, 2006

Atty. Docket No. 42P17654
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Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Currently Amended) A method comprising:

determining an ambient light level for an operating environment of a display device having an adjustable backlight to provide variable brightness; and

modifying [[a]] color [[brightness of]] luminance values corresponding to one or more portions of an image to be displayed on the display device based on the ambient light level.

2.   (Original) The method of claim 1 further comprising modifying the backlight intensity based on the modified color brightness.

3.   (Original) The method of claim 2 wherein modification to the backlight intensity approximately offsets the modification to the color brightness.

4.   (Original) The method of claim 1 wherein determining the ambient light level comprises receiving a signal from an ambient light sensor indicating the ambient light level.

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5.   (Original) The method of claim 1 wherein determining the ambient light level comprises receiving a user input.

6.   (Original) The method of claim 1 wherein modifying the color brightness comprises modifying a color look-up table.

7.   (Original) The method of claim 2 wherein modifying the backlight intensity comprises modifying a pulse width modulation signal that controls backlight illumination.

8.   (Previously Presented) The method of claim 2 wherein modifying the backlight intensity comprises:

determining a hardware register value corresponding to a baseline backlight intensity value;

applying a software generated value to the register value to generate a modified backlight intensity value; and

using the modified backlight intensity value to cause the backlight intensity to be modified.

9.   (Original) The method of claim 8 wherein the baseline backlight intensity value is determined based on a user provided input.

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10.   (Original) The method of claim 8 wherein the baseline backlight intensity value is determined based on a power state of the display device.

11.   (Original) The method of claim 8 wherein the hardware register value is stored in a register within a Peripheral Component Interconnect configuration space.

12.   (Currently Amended) A method comprising:

determining an ambient light level for a display device having an adjustable backlight to provide variable backlight intensity;

modifying the backlight intensity based on the ambient light level; and

modifying a color [[brightness of]] luminance values corresponding to one or more portions of an image to be displayed on the display device based on the modified intensity of the adjustable backlight.

13.   (Original) The method of claim 12 wherein modification to the color brightness approximately offsets the modification to the backlight intensity.

14.   (Original) The method of claim 12 wherein determining the ambient light level comprises receiving a signal from an ambient light sensor indicating an ambient light level.

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15.   (Original) The method of claim 12 wherein determining the ambient light level comprises receiving a user input.

16.   (Previously Presented) The method of claim 12 wherein modifying the color brightness comprises modifying a pixel color using a graphics controller look-up table prior to passing the pixel to the display device.

17.   (Original) The method of claim 12 wherein modifying the backlight intensity comprises modifying a pulse width modulation signal that controls backlight illumination.

18.   (Previously Presented) The method of claim 12 wherein modifying the backlight intensity comprises:

determining a hardware register value corresponding to a baseline backlight intensity value;

applying a software generated value to the register value to generate a modified backlight intensity value; and

using the modified backlight intensity value to cause the backlight intensity to be modified.

19.   (Original) The method of claim 18 wherein the baseline backlight intensity value is determined based on a user provided input.

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20.   (Original) The method of claim 18 wherein the baseline backlight

intensity value is determined based on a power state of the display device.

21.   (Original) The method of claim 18 wherein the hardware register value is

stored in a register within a Peripheral Component Interconnect configuration space.

22.   (Currently Amended) An apparatus comprising:

an ambient light sensor to generate signals indicating a sensed ambient light level;

a display device having an adjustable backlight source; and

a graphics control device coupled with the ambient light sensor on the display

device, the graphics control device to modify <u>luminance values corresponding to one or</u>

<u>more portions of an</u> image [[brightness]] and backlight intensity based on the sensed

ambient light level.

23.   (Original) The apparatus of claim 22 wherein the graphics control device

modifies image brightness for one or more portions of an image to be displayed on the

display device based on the sensed ambient light level and to modify the backlight

intensity based on the modified image brightness.

24.   (Original) The apparatus of claim 22 wherein the graphics control device

modifies backlight intensity based on the sensed ambient light level and modifies the

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color brightness for one or more portions of an image to be displayed on the display device based on the modified backlight intensity.

25.   (Original) The apparatus of claim 22 wherein the display device comprises a flat-panel liquid crystal display.

26.   (Original) The apparatus of claim 22 wherein the display device comprises a plasma display device.

27.   (Original) The apparatus of claim 22 wherein the graphics control device comprises:

a backlight control circuit coupled with the adjustable backlight source to control the intensity of backlight provided by the adjustable backlight source; and

a display control circuit coupled with the ambient light sensor and the backlight control circuit to apply an adjustment to a baseline backlight including at least the sensed ambient light level to generate a modified backlight intensity signal;

wherein the backlight control circuit causes the adjustable backlight source to provide a backlight intensity corresponding to the modified backlight intensity value.

28.   (Original) The apparatus of claim 27 wherein the backlight control circuit provides a pulse width modulated signal to the adjustable backlight source to control the intensity of the backlight provided by the adjustable backlight source.

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29.   (Original) The apparatus of claim 27 wherein the baseline backlight

intensity is retrieved from a register coupled with the backlight controller.

30.   (Original) The apparatus of claim 27 wherein the adjustment to the

baseline backlight intensity further comprises user-specified adjustment parameters.

31.   (Original) The apparatus of claim 30 wherein the user-specified

adjustment parameters comprise a range of desired backlight adjustments.

32.   (Currently Amended) An article comprising a computer-readable medium

having stored thereon instructions that, when executed, cause one or more processing

devices to:

determine an ambient light level for a display device having an adjustable

backlight to provide variable backlight intensity; and

modify a color [[brightness of]] luminance values corresponding to one or more

portions of an image to be displayed on the display device based on the ambient light

level.

33.   (Original) The article of claim 32 further comprising instructions that,

when executed, cause the one or more processing devices to modify the backlight

intensity based on the modified color brightness.

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34.   (Original) The article of claim 33 wherein modification to the backlight

intensity approximately offsets the modification to the color brightness.

35.   (Original) The article of claim 32 wherein the instructions that cause the

one or more processing devices to determine the ambient light level comprise instructions

that, when executed, cause the one or more processing devices to receive a signal from an

ambient light sensor indicating the ambient light level.

36.   (Original) The article of claim 32 wherein the instructions that cause the

one or more processing devices to determine the ambient light level comprise instructions

that, when executed, cause the one or more processing devices to receive a user input.

37.   (Previously Presented) The article of claim 32 wherein the instructions

that cause the one or more processing devices to modify the color brightness comprise

instructions that, when executed, cause the one or more processing devices to adjust the

pixel luminance, using a color look-up table.

38.   (Original) The article of claim 33 wherein the instructions that cause the

one or more processing devices to modify the backlight intensity comprise instructions

that, when executed, cause the one or more processing devices to modify a pulse width

modulation signal that controls backlight illumination.

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39.   (Previously Presented) The article of claim 33 wherein the instructions that cause the one or more processing devices to modify the backlight intensity further comprise instructions that, when executed, cause the one or more processing devices to:

determine a hardware register value corresponding to a baseline backlight intensity value;

apply a software generated value to the register value to generate a modified backlight intensity value; and

use the modified backlight intensity value to cause the backlight intensity to be modified.

40.   (Original) The article of claim 39 wherein the baseline backlight intensity value is determined based on a user provided input.

41.   (Original) The article of claim 39 wherein the baseline backlight intensity value is determined based on a power state of the display device.

42.   (Currently Amended) An article comprising a computer-readable medium having stored thereon instructions that, when executed, cause one or more computing devices to:

determine an ambient light level for a display device having an adjustable backlight to provide variable backlight intensity;

modify the backlight intensity based on the ambient light level; and

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modify [[a]] color [[brightness]] luminance values corresponding to or one or

more portions of an image to be displayed on the display device based on the modified

intensity of the adjustable backlight.

43.   (Original) The article of claim 42 wherein modification to the color

brightness approximately offsets the modification to the backlight intensity.

44.   (Original) The article of claim 42 wherein the instructions that cause the

one or more processing devices to determine the ambient light level comprise instructions

that, when executed, cause the one or more processing devices to receive a signal from an

ambient light sensor indicating an ambient light level.

45.   (Original) The article of claim 42 wherein the instructions that cause the

one or more processing devices to determine the ambient light level comprise instructions

that, when executed, cause the one or more processing devices to receive user input.

46.   (Previously Presented) The article of claim 42 wherein the instructions

that cause the one or more processing devices to modify the color brightness comprise

instructions that, when executed, cause the one or more processing devices to adjust the

pixel luminance, using a color look-up table.

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47.   (Original) The article of claim 42 wherein the instructions that cause the one or more processing devices to modify the backlight intensity comprise instructions that, when executed, cause the one or more processing devices to modify a pulse width modulation signal that controls backlight illumination.

48.   (Previously Presented) The article of claim 42 wherein the instructions that cause the one or more processing devices to modify the backlight intensity comprise instructions that cause the one or more processing devices to:

determine a hardware register value corresponding to a baseline backlight intensity value;

apply a software generated value to the register value to generate a modified backlight intensity value; and

use the modified backlight intensity value to cause the backlight intensity to be modified.

49.   (Original) The article of claim 48 wherein the baseline backlight intensity value is determined based on a user provided input.

50.   (Original) The article of claim 48 wherein the baseline backlight intensity value is determined based on a power state of the display device.

51.   (Currently Amended) A system comprising:

a bus;

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an ambient light sensor coupled with the bus to generate signals indicating a

sensed ambient light level;

an input/output controller coupled with the bus;

a display device having an adjustable backlight source; and

a graphics control device coupled with the ambient light sensor on the display

device, the graphics control device to modify <u>luminance values corresponding to one or</u>

<u>more portions of an</u> image [[brightness]] and backlight intensity based on the sensed

ambient light level.

52.   (Original) The system of claim 51 wherein the graphics control device

modifies image brightness for one or more portions of an image to be displayed on the

display device based on the sensed ambient light level and to modify the backlight

intensity based on the modified image brightness.

53.   (Original) The system of claim 51 wherein the graphics control device

modifies backlight intensity based on the sensed ambient light level and modifies the

color brightness for one or more portions of an image to be displayed on the display

device based on the modified backlight intensity.

54.   (Original) The system of claim 51 wherein the display device comprises a

flat-panel liquid crystal display.

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55.   (Original) The system of claim 51 wherein the display device comprises a

plasma display device.

56.   (Original) The system of claim 51 wherein the graphics control device

comprises:

a backlight control circuit coupled with the adjustable backlight source to control

the intensity of backlight provided by the adjustable backlight source; and

a display control circuit coupled with the ambient light sensor and the backlight

control circuit to apply an adjustment to a baseline backlight including at least the sensed

ambient light level to generate a modified backlight intensity signal;

wherein the backlight control circuit causes the adjustable backlight source to

provide a backlight intensity corresponding to the modified backlight intensity value.

57.   (Original) The system of claim 56 wherein the backlight control circuit

provides a pulse width modulated signal to the adjustable backlight source to control the

intensity of the backlight provided by the adjustable backlight source.

58.   (Original) The system of claim 56 wherein the baseline backlight

intensity is retrieved from a register coupled with the backlight controller.

59.   (Original) The system of claim 56 wherein the adjustment to the baseline

backlight intensity further comprises user-specified adjustment parameters.

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60.   (Original) The system of claim 59 wherein the user-specified adjustment

parameters comprise a range of desired backlight adjustments.

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